FEINBERG DAY KRAMER ALBERTI
LIM TONKOVICH & BELLOLI LLP
Robert F. Kramer (SBN 181706)
rkramer@feinday.com
M. Elizabeth Day (SBN 177125)
eday@feinday.com
David Alberti (SBN 220625)
dalberti@feinday.com
Russell S. Tonkovich (SBN 233280)
rtonkovich@feinday.com
Marc C. Belloli (SBN 244290)
mbelloli@feinday.com
Nicholas V. Martini (SBN 237687)
nmartini@feinday.com
Kate E. Hart (SBN 275121)
khart@feinday.com
Aidan M. Brewster (SBN 319691)
abrewster@feinday.com
1600 El Camino Real, Suite 280
Menlo Park, California 94025
Telephone: (650) 618-4360
Facsimile: (650) 618-4368

Attorneys for Plaintiff
Polaris PowerLED Technologies, LLC

UNITED STATES DISTRICT COURT
FOR THE CENTRAL DISTRICT OF CALIFORNIA

POLARIS POWERLED TECHNOLOGIES, LLC,

Plaintiff,

v.

VIZIO, INC.,

Defendant.

Case No. 8:18-cv-01571-JVS (DFMx)

PLAINTIFF POLARIS POWERLED TECHNOLOGIES, LLC'S RESPONSIVE CLAIM CONSTRUCTION BRIEF

Hearing: October 24, 2019
Time: 3:00 p.m.
Crtrm: 10C
Judge: Hon. James V. Selna

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I. INTRODUCTION

The Court should adopt Polaris' constructions as they are consistent with the intrinsic evidence and plain meaning of the claim terms. The Court should reject VIZIO's attempt to invalidate all claims of the '117 patent based on indefiniteness arguments that are contrary to Federal Circuit precedent and the intrinsic evidence.

II. ARGUMENT

A. "Ambient Light"

Claim Term	Polaris' Construction	VIZIO's Construction
"ambient light"	Plain and ordinary meaning	Light surrounding a visible display

The Federal Circuit is clear that, "[a]bsent lexicography or disavowal, we do not depart from the plain meaning of the claims." *Luminara Worldwide, LLC v. Liown Elecs. Co. Ltd.*, 814 F.3d 1343, 1353 (Fed. Cir. 2016). VIZIO had not identified any lexicography in the specification or any disavowal by the patentee. Therefore, as a matter of law, "ambient light" should be given its plain and ordinary meaning as proposed by Polaris.

"Ambient light" is a plain English phrase that is easily understood by a jury and does not require further construction. VIZIO's argument that the court must construe this term because a jury will be confused and think that "ambient light" means "light in another room" does not make sense in the context of the claims. For example, claim 1 states "a ***light sensor configured to sense ambient light*** and to output a sensing signal indicative of the ambient light level." Ex. A, claim 1.[1] In the claims, "ambient light" is the light *at* the light sensor that is detected *by* the light sensor, which is part of the claimed apparatus (*i.e.*, the light sensor is part of the accused televisions). Therefore, in the claims, a juror would understand that "ambient light" has its plain meaning and is the light in the environment at the light

[1] All exhibits are to the Declaration of Kate E. Hart. All emphasis added unless otherwise stated.

sensor that is detected by the light sensor in the accused televisions. There is thus no ambiguity regarding "ambient light" in the context of the asserted claims.

VIZIO makes two related arguments for its construction, which are both contrary to the claim language and specification. ***First***, VIZIO incorrectly argues that "ambient light" is light broadly "surrounding a visible display." However, the intrinsic evidence is clear that the "ambient light" is the light in the environment around the light sensor ***not*** the "light surrounding a visible display." The specification consistently explains that the light sensor detects the ambient light ***at*** the light sensor and not anywhere else on the claimed apparatus.

> The visible ***light sensor 402 outputs a sensor current signal in proportion to sensed ambient light level***.
>
> The ***light detector 500 generates an initial current in response to sensed ambient light***.
>
> In one embodiment, the reference voltage is generated using a sensor current signal from a visible ***light sensor 902 that senses ambient light***.
>
> The brightness control circuit of FIG. 10 advantageously uses a visible ***light sensor 1000 with two current source outputs that produce currents that are proportional to the sensed ambient light***.

Ex. A, col. 7:5-7, 8:13-14, 10:45-47, 11:39-42. The specification further describes that the ambient light is measured in units of "lux," which is defined as lumens (a measure of quantity of light) per square meter (reflecting the area of the light sensor's photodetecting region). Balakrishnan Decl., ¶ 6.

> FIG. 3 illustrates brightness control signals as a function of ***ambient light levels*** for different user settings in accordance with the brightness control circuit of FIG. 1. For example, ***ambient light levels are indicated in units of lux (or lumens/square meter)*** on a horizontal axis (or x-axis) in increasing order.

Ex. A, col. 5:44-49. This confirms that the "ambient light" is the light in the environment of the light sensor in the accused products. Balakrishnan Decl., ¶ 6.

Rather than clarifying "ambient light," VIZIO's construction would introduce ambiguity as it is unclear if "visible display" in VIZIO's construction refers to the

entire television or just the screen. For example, does "surrounding a visible display" include light behind the television away from the screen? Does it include light above or below the television? Since light "surrounding" a television or a screen can vary significantly at different locations around the television, "light surrounding a visible display" is ambiguous and unclear. *Id*. at ¶ 4.

Second, VIZIO appears to be arguing that "ambient light" cannot be just "natural" or "background" light but must always include "light produced from the display itself." This is incorrect. One of ordinary skill in the art would understand "ambient light" to refer to the light in the environment around the light sensor from any and all sources. *Id*. at ¶ 7. The '117 patent does not restrict "ambient light" to light from any particular type of source. *Id*. This makes sense as light from various sources such as lamps, light fixtures, sunlight, and electronics will spread out and blend together to create "ambient light" in a particular environment. *Id*.

The intrinsic evidence does not support restricting the source of the "ambient light," to require in these claims, as VIZIO contends, that it must include and/or consist only of light emitted from the display. For example, the specification states that "ambient light" can be "room lighting," which is the light in the room from all sources (*e.g.*, sunlight, lamps, electronics, etc.).

> The ability to read the display is hampered under conditions of ***high ambient room lighting***. Ambient lighting reflects off the surface of the LCD and adds a bias to the light produced by the LCD, which reduces the display contrast to give the LCD a washed-out appearance. The condition can be improved by increasing the brightness of the backlight for the LCD, thereby making the light provided by the LCD brighter in comparison to the reflected light off the LCD surface.

Ex. A, col. 1:25-33; Balakrishnan Decl., ¶ 7.

Further, contrary to VIZIO's argument that "ambient light" must include light from the visible display, the specification includes several embodiments with transflective displays wherein the visible display will emit *no light* when the "ambient light" is sufficient thereby definitively establishing that "ambient light"

does not have to include light from the visible display as VIZIO contends. *Id*. at ¶ 8.

> The automatic shutdown circuit ***turns off the light sources [i.e., visible display] when the ambient light is greater than a predefined level***.
>
> When lighting transflective displays, it may be preferred to ***shut off auxiliary light sources (e.g., backlight or frontlight [of the visible display]) when ambient lighting is sufficient*** to illuminate the display.

Ex. A, col. 2:64-66. VIZIO's arguments are directly contrary to, and would exclude, these preferred embodiments. VIZIO's construction is thus incorrect. *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001) ("[A] claim construction that would exclude the preferred embodiment is rarely, if ever, correct.") (internal citations omitted).

Polaris respectfully submits that the Court should reject VIZIO's construction and adopt the plain and ordinary meaning for this limitation.

B. "Configured To"

Claim Term	Polaris' Construction	VIZIO's Construction
"configured to"	actually programmed or implemented with hardware or software to	Plain and ordinary meaning

Polaris' construction of "configured to" is the construction of the district court (Chief Judge Gilstrap) earlier this year in *Polaris PowerLED Tech., Inc. v. Samsung Elecs. Am., Inc. et al.*, Civil Action No. 2:17-cv-00715-JRG (E.D. Tex.) (the "*Samsung* case"). Ex. B, at pp. 3-4. The district court in the *Samsung* case construed "configured to" at summary judgment when the court was fully engaged in the details of the merits of the case. The district court's construction is well reasoned and rooted in intrinsic evidence and the case law as shown below.

> The Court, consistent with *O2 Micro International Ltd. v. Beyond Innovation Technology Co.*, determined that this motion and Polaris's related motion (Dkt. No. 196) raised an actual dispute as scope of the term "configured to," as set forth in U.S. Patent No. 8,223,117 (the "'117 Patent"), requiring additional claim construction. (Dkt. No. 330, at 131:8–12, 20–23.) 521 F.3d 1351, 1360 (Fed. Cir. 2008) ("When the parties raise an actual dispute regarding the proper scope of [the] claims, the court, not the jury, must resolve that dispute."). Accordingly, the Court *sua sponte* construed the term "configured to" (Dkt. No. 18-1, at 12:30–38) as "**actually programmed or implemented with hardware or software to**." (Dkt. No. 330, at

> 131:13–19.) See *SIPCO, LLC v. ABB, Inc.*, No. 6:11-cv-48-LED-JDL, 2012 WL 3112302, at *11 (E.D. Tex. July 30, 2012) ("[T]he claims mandate that the devices are 'configured to' perform particular functions. Interpreting 'configured to' as requiring only mere capability would eliminate any meaningful limits to the claims. Accordingly, the Court finds that 'configured to' means 'actually programmed or equipped with hardware or software to.'"). This construction is consistent with the intrinsic record—i.e., the specification of the '177 [sic] Patent. (*See e.g.*, Dkt. No. 18-1, at 2:7–10 ("In one embodiment, ***software*** algorithm can be used to multiply the light sensor output with the user selectable brightness control. In another embodiment, ***analog or mixed signal circuits*** can be used to perform the multiplication.") (emphasis added).)

Id. (emphasis in original). Polaris proposes that the Court adopt Judge Gilstrap's construction to avoid a second round of claim construction as occurred in the *Samsung* case.

VIZIO's allegations that Polaris' construction is a "backdoor attempt to broaden" the claims is meritless. ECF 105 at 8. Citing the district court's construction from the *Samsung* case is not a "backdoor" attempt at anything. Rather, it is a transparent attempt to provide the Court with relevant information. VIZIO, however, intentionally does ***not*** mention the district court's construction in its opening brief so that it can make such baseless accusations. *Id*. at 6-9.

VIZIO's other argument that "actually programmed or implemented with hardware or software to" is too broad of a construction because it includes software is contrary to the intrinsic evidence, knowledge of one of ordinary skill in the art, and common sense. The claims of the '117 patent relate to a brightness control circuit for selective ambient light correction. Ex. A, col. 12:28-14:36. In any sort of electronic or computerized apparatus like those claimed in the '117 patent, functions are performed in either hardware or software. Balakrishnan Decl., ¶ 10. In fact, the '117 patent is clear that the term "circuit" refers broadly to hardware or software. *See, e.g.,* Ex. A at col. 5:37-38 ("The multiplier circuit 106 can be implemented using software algorithm or analog/mixed-signal circuitry."). There is no language in the claims or specification requiring hardware or excluding software.

One of ordinary skill in the art would thus understand that each of the claim

elements with "configured to" can be implemented in hardware or software. Balakrishnan Decl., ¶ 10. The specification states, and VIZIO does not dispute, that the "multiplier" can be a "software algorithm." Ex. A, col. 5:37-38; ECF 105 at 8-9. The multiplier is central to the claimed invention as it performs the math to generate the combined signal based on the user and sensing signals and performs mathematical operations involving the dark level bias.

> **1.** A brightness control circuit with selective ambient light correction comprising:…
>
> a ***multiplier configured to selectively generate a combined signal based on both the user signal and the sensing signal***;
>
> a dark level bias configured to adjust the combined signal to generate a brightness control signal…
>
> **2.** The brightness control circuit of claim 1, wherein the ***dark level bias is provided to the multiplier*** such that the amount of adjustment to the combined signal is dependent on the user selectable brightness setting.
>
> **3.** The brightness control circuit of claim 2, wherein the ***multiplier multiplies a sum of the user signal and the sensing signal by the dark level bias*** to generate an output signal corresponding to the brightness control signal.
>
> 16. The method of claim 15, wherein the step of ***selectively multiplying the input signal with the sense signal is performed by a software algorithm***, an analog circuit, or a mixed-signal circuit.
>
> 17. The method of claim 15, wherein the ***dark level bias is added to the sense signal before selective multiplication*** such that the amount of adjustment to the combined signal is dependent on the input signal.

Ex. A, claims 1, 2, 3, 16, 17.

One of ordinary skill in the art would understand that, if the multiplier or the multiplication is performed in software, then the "user signal," "sensing signal," and "dark level bias" would necessarily also be implemented in software. Balakrishnan Decl., ¶ 12. For example, the specification states that "[i]n one embodiment, *software algorithm can be used to multiply the light sensor output with the user selectable brightness control*." Ex. A, col. 2:7-9. In order for a software algorithm

to multiply two signals (*e.g.*, the "sensing signal" and "user signal"), both signals need to be present as software variables. Balakrishnan Decl., ¶ 12. In fact, for any math performed in software, all values used in the calculations must be implemented in the software. *Id*. This is an indisputable fact of how software works.

In claim 1, the "combined signal" generated by the *software algorithm* multiplier will also be in software. *Id*. at ¶ 13. If the "combined signal" is in software, then the "dark level bias" must also be in software to adjust the "combined signal." *Id*. This is consistent with Figure 1 and 2, which show a block diagram that can be implemented in either hardware or software. *Id*.

Similarly, claim 2 states that the "dark level bias is provided to the multiplier." Ex. A, claim 2. For the "dark level bias" to be provided to a *software algorithm* multiplier, the "dark level bias" must also be in software (*e.g.,* a software variable). Balakrishnan Decl., ¶ 14. Claim 3 provides that "the multiplier multiplies a sum of the user signal and the sensing signal by the dark level bias." Ex. A, claim 3. Again, if the *software algorithm* multiplier is multiplying the "dark level bias" by the "sum of the user signal and sensing signal," then these values must be implemented in software. Balakrishnan Decl., ¶ 14. This is sensible in terms of the claim and specification as the ***only*** way that the multiplier can be a "software algorithm" is if the signals that it is manipulating (*e.g.*, user signal, sensing signal, dark level bias) are also implemented in software (*e.g.*, as software variables). *Id*.

All of the claims containing "configured to" can be implemented in either software or hardware. *Id*. at ¶¶ 15-17. Recognizing this is true for the other claims, VIZIO focuses its briefing on arguing that the "amplifier" in claim 13 cannot be software. This is incorrect. There is nothing in the specification limiting an "amplifier" to hardware. In fact, one of ordinary skill in the art would recognize that amplifiers are commonly implemented in software as well as hardware. Balakrishnan Decl., ¶ 18. Amplifying a signal in software merely requires increasing the number value of that signal in software by replacing the number value

or performing a mathematical function to change its value. *Id*. One of ordinary skill in the art would thus understand that the "amplifier" in claim 13 could be implemented in hardware or software. *Id*. at ¶ 18. Similarly, it is not unusual to have software associated with a light sensor to groom, condition, or modify the output of the light sensor. *Id*. at ¶ 15.

Therefore, the Court should adopt the district court's construction from the *Samsung* case as proposed by Polaris.

C. "Dark Level Bias" Terms

VIZIO's arguments are largely repetitive for the different "dark level bias" terms. Polaris will address all of the "dark level bias" terms for all asserted claims together in this section.

1. VIZIO Cannot Meet Its Burden of Clear and Convincing Evidence as a Prior District Court, Multiple Parties, and VIZIO's Own Expert All Agree "Dark Level Bias" Is Definite

Polaris construction is the district court's construction issued by Chief Judge Gilstrap in the *Samsung* case. The court construed "a dark level bias configured to adjust the combined signal" to have its plain and ordinary meaning stating that the "dark level bias" is a "value" (*e.g.*, voltage value of an electrical signal or value of a software variable) as both parties and their experts agreed.

> ***The parties do not dispute that the dark level bias is a value***. Indeed, ***it is clear from the context of the surrounding claim language that the dark level bias is a value***… Accordingly, ***the Court*** rejects Defendants' proposed "added"/"adding" and "predetermined" limitations and ***holds that the "dark level bias" terms have their plain and ordinary meaning without the need for further construction***.

Ex. C, at pp. 25, 30. In that case, Samsung, Polaris, and Dr. Hobbs, who was Samsung's expert and is now VIZIO's expert in this case who offered testimony in its Rule 11 briefing (ECF 74-2), all agreed that "dark level bias" was definite and was a value (*e.g.*, voltage value or software value) that is a structural characteristic of the claimed brightness control circuit. Ex. D (Dr. Hobbs' Claim Construction Declaration), at pp. 17-18. Polaris' expert, Dr. Balakrishnan, similarly testified that

the "dark level bias" is definite and a value generated as a structural characteristic of the circuit as explained below. Balakrishnan Decl., ¶¶ 20-21, 24-26.

VIZIO cannot show that "dark level bias" is indefinite by clear and convincing evidence. The fact that a prior district court, multiple different experts, and a prior defendant all agreed that "dark level bias" is definite and has a plain and ordinary meaning of a "value" in light of the same intrinsic evidence weighs heavily against a finding of indefiniteness.

2. The Claims and Specification Are Consistent and Support Polaris' Construction and Prior District Court's Construction

In two different sections, VIZIO argues that the intrinsic evidence defines "dark level bias" in "irreconcilable" ways. ECF 105 at 11-12, 14-15. VIZIO's arguments are meritless. First, VIZIO's argument that the "dark level bias" is inconsistent in claim 1 and its dependents is wrong. The claims consistently describes the "dark level bias" as a signal generated by the "brightness control circuit" whose value is used to adjust the combined signal. Claim 1 states "a dark level bias configured to adjust the combined signal to generate a brightness control signal," which means that the "dark level bias" value (*e.g.*, voltage value of an electrical signal or value of a software variable) is adjusting the magnitude of the combined signal to generate a new signal called a brightness control signal.

The dependent claims state how the "adjust[ing]" occurs, which can be, for instance, by addition. The fact the "dark level bias" is being added and multiplied is again consistent with the "dark level bias" being the value of a signal (*e.g.*, voltage value of an electrical signal or value of a software variable) generated by the brightness control circuit.

> 3. The brightness control circuit of claim 2, wherein the ***multiplier multiplies a sum of the user signal and the sensing signal by the dark level bias*** to generate an output signal corresponding to the brightness control signal.
>
> 4. The brightness control circuit of claim 1, wherein the ***dark level bias is added to*** the combined signal such that the amount of

> adjustment to the combined signal is independent of the user selectable brightness setting.
>
> 5. The brightness control circuit of claim 4, wherein the ***dark level bias is added to*** an output of the multiplier.

Ex. A, claims 3-5. The claims are thus consistent in their use of "dark level bias" as a value (*e.g.*, voltage value of an electrical signal or value of a software variable).

VIZIO admits that the "dark level bias" is a "value" in the dependent claims stating "[t]he dependent claims to claim 1, however, suggest to a person of ordinary skill in the art that the 'dark level bias' is a signal or value." ECF 105 at 12. VIZIO's admission that "dark level bias" means a "value" in the dependent claims is consistent with claim 1. Claim 1 states "a dark level bias configured to adjust the combined signal to generate a brightness control signal." One of ordinary skill in the art would understand the "dark level bias" in claim 1 to be the value of a signal (*e.g.*, voltage value of an electrical signal or value of a software variable) that adjusts the magnitude of the combined signal to generate a brightness control signal. Ex. A, claim 1; Balakrishnan Decl., ¶ 22. "Dark level bias" in all of the claims. thus has the same meaning throughout all of the claims.

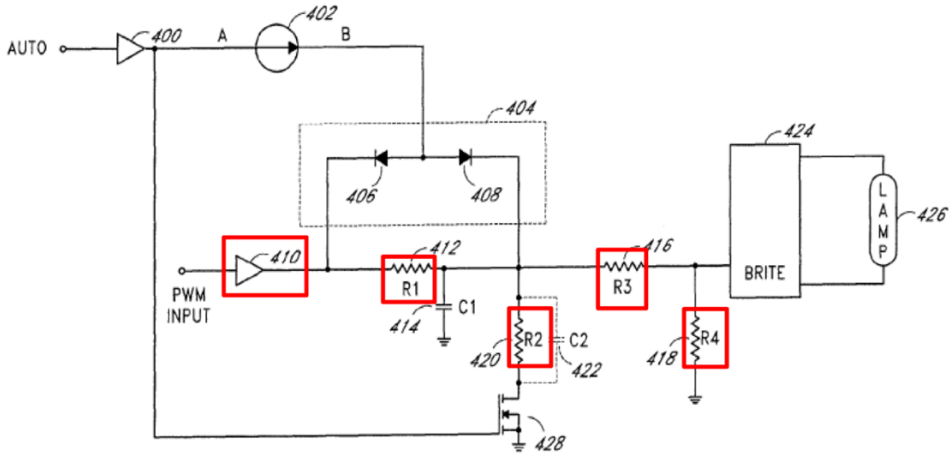
The specification is consistent with the "dark level bias" being the value of a signal generated by the "brightness control circuit." The embodiments consistently show that the "dark level bias" signal that is a structural characteristic intrinsic to the claimed "brightness control circuit." Balakrishnan Decl., ¶¶ 22-24. For example, as shown in Figure 4 and its associated equation, the "dark level bias" is generated by the VCC (input at 410), resistor R1, resistor R2, resistor R3, and resistor R4 (as shown in red) in the circuit. *Id.*

Dark Level Bias

$$BCS1 = dutycycle \times \left[\left(\frac{VCC \times R2 \times R4}{[(R1+R2)\times(R3+R4)]+(R1\times R2)}\right) + \left(\frac{ISRC \times R1 \times R2 \times R4}{[(R1+R2)\times(R3+R4)]+(R1\times R2)}\right)\right]$$

The term ***"VCC" corresponds to the logic high output from the input buffer circuit 410***… The ***first major term within the brackets corresponds to a scaled dark bias level*** of the brightness control signal in total ambient darkness...

FIG. 4



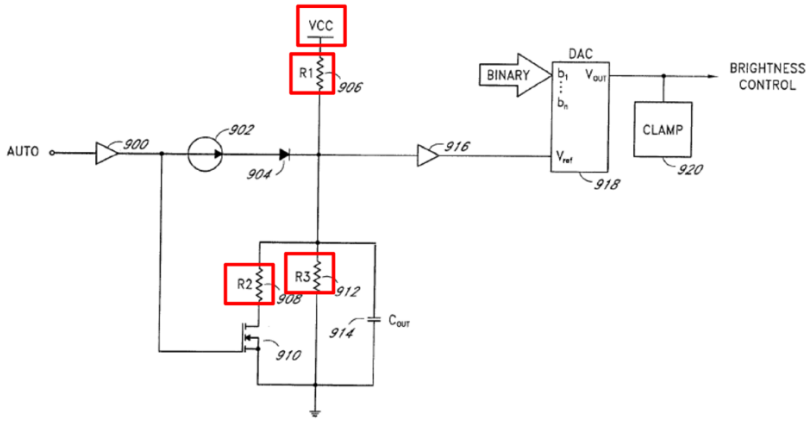
Ex. A, Fig. 4, col. 7:17-35. The "dark level bias" value is thus a structural characteristic of the brightness control circuit as shown in Figure 4 and its accompanying equation. The "dark level bias" value ensures that the brightness control signal (BCS) is above a predetermined level when the sensing signal (ISRC) is zero. Balakrishnan Decl., ¶ 24.

Similarly, as shown in Figure 9 and its associated equation, the "dark level bias" is a signal value generated by the brightness control circuit involving the supply voltage (VCC), resistor R1, resistor R2, and resistor R3. *Id.* at ¶ 25.

$$BCS5 = \text{binary \% fullscale} \times \left[\left(\frac{[VCC \times (R2 \times R3)] + [ISRC \times R1 \times R2 \times R3]}{(R1 \times R2) + (R1 \times R3) + (R2 \times R3)}\right)\right]$$

Dark Level Bias

FIG. 9



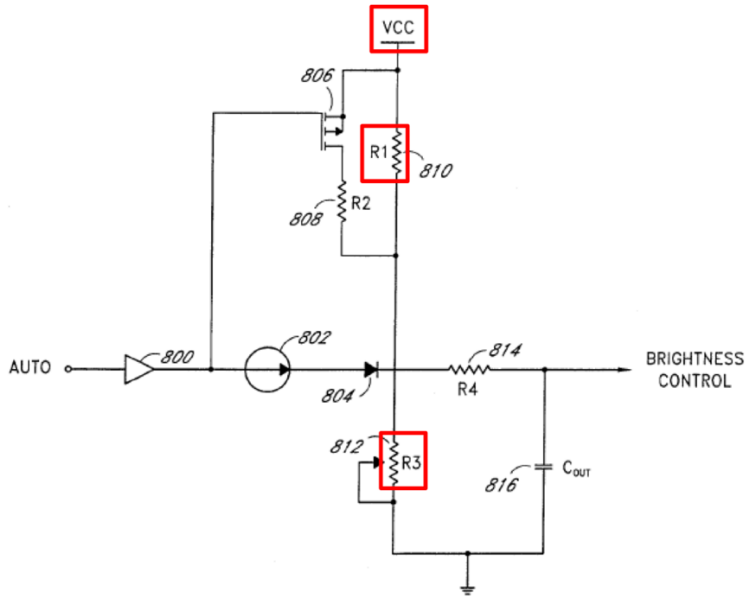
Ex. A at Fig. 9, col. 11:10-15. Again, the "dark level bias" in Figure 9 ensures that the brightness control signal (BCS) is above a predetermined level when the sensing signal (ISRC) is zero. Balakrishnan Decl., ¶ 25.

Figure 8 is again consistent with the "dark level bias" being a signal value generated by the circuit. As shown in its equation, the "dark level bias" in Figure 8 is generated by the VCC voltage, resistor R1, and resistor R3. *Id.* at ¶ 26.

Dark Level Bias

$$BCS3 = \left[VCC \times \frac{R3}{(R1 + R3)}\right] + \left[ISRC \times \frac{(R1 \times R3)}{(R1 + R3)}\right]$$

FIG. 8



Ex. A, Fig. 8, col. 10:10-12. As in the other embodiments, the "dark level bias" ensures that the brightness control signal (BCS) is above a predetermined level when the sensing signal (ISRC) is zero. Balakrishnan Decl., ¶ 26.

In accordance with how one of ordinary skill in the art would understand the term, the specification, independent claims, and dependent claims are clear that the "dark level bias" is a value of a signal. Balakrishnan Decl., ¶ 21. Therefore, there is no "irreconcilable" definitions of "dark level bias" in the intrinsic evidence.

Based on this same intrinsic evidence, the district court in the *Samsung* case held that "dark level bias" has its plain and ordinary meaning of a "value." The same expert that VIZIO relied on in its Rule 11 motion (ECF 74-2), Dr. Hobbs, testified for Samsung that "dark level bias" was definite and was a "value." Ex. D, at pp. 17-18. The intrinsic evidence, the testimony of two experts, Dr. Hobbs and Dr. Balakrishnan, and a prior district court ruling all understood "dark level bias" to be a "value" of a signal generated by the claimed brightness control circuit. Therefore, "dark level bias" is definite and VIZIO cannot meet its burden of clear and convincing evidence.

VIZIO's citation to *Transcend Medical* is inapposite on its facts. *Transcend Medical* involved a strange set of facts where the "patents-in-suit at times define 'choroid' consistent with the term's plain and ordinary meaning" of "the vascular layer of the eye located between the sclera and retina." *Transcend Medical, Inc. v. Glaukos Corp.*, No. 13-830, 2015 WL 5546988, at *5-6 (D.Del. Sept. 18, 2015). During prosecution, the applicant argued that "choroid" included another structure called the "ciliary body." *Id*. at *6. These were express and mutually exclusive definitions of "choroid." Here, there are not multiple, mutually exclusive definitions expressly stated in the patent and file history. Therefore, *Transcend Medical* is inapposite on the facts.

3. The Specification and File History Are Consistent and Support Polaris' Construction

VIZIO argues incorrectly that the specification and file history are inconsistent. As explained above, the specification explains that the "dark level bias" is the value of a signal generated by the "brightness control circuit." As the embodiments and equations show, the "brightness control circuit" generates a "dark level bias" value. Even VIZIO admits that the specification suggests that "the 'dark level bias' is a signal or value." ECF 105 at 13.

However, VIZIO incorrectly argues that the specification and file history are inconsistent because the term "dark level bias circuit" appears in one paragraph in the specification and file history. This term literally appears in ***only one paragraph*** at the beginning of the patent discussing "various different embodiments." Ex. A, col. 2:54-61. The remainder of the patent discusses "dark level bias" not a "dark level bias circuit." The mention of "dark level bias circuit" is in reference to one possible type of embodiment as is clear from the specification. The file history cite to "dark level bias circuit" identified by VIZIO is a sentence quoting the from that one paragraph in the specification. ECF 105-3 at POLARIS_0000435. The argument regarding prior art in the file history related to "dark level bias," which was the claim term, not "dark level bias circuit" as VIZIO incorrectly suggests. *Id*.

Importantly, "dark level bias *circuit*" was in the originally filed claims of the '117 patent. ECF 105-3 at POLARIS_0000299. In an amendment, the applicant purposefully canceled all claims containing "dark level bias *circuit*" and added a new set of claims containing only "dark level bias." *Id*. at POLARIS_0000428-432. VIZIO's attempt to read "dark level bias *circuit*" back into the claims for purposes of its indefiniteness argument is improper. *Laryngeal Mask Co., Ltd. v. AMBU A/S*, 618 F.3d 1367, 1373 (Fed. Cir. 2010) (holding that limitation deleted during prosecution cannot be re-inserted into claims via claim construction); *Transonic Sys., Inc. v. Non-Invasive Med. Techs. Corp.*, 143 F. App'x 320, 326 (Fed. Cir. 2005) ("this court's case law precludes a reading that restricts [a claim limitation] to the limitations removed by broadening amendment" during prosecution).

4. VIZIO's Alternative Argument About Mixed Apparatus-Method Claims Is Meritless and Legally Erroneous

VIZIO's argument that claim 1 is a mixed method-apparatus claim is factually and legally wrong. ***First***, claim 1 does not contain any method steps. The claim language "a dark level bias configured to adjust the combined signal to generate a brightness control signal that is used to control a brightness level of a visible display such that the brightness control signal is maintained above a predetermined level when the ambient light level decreases to approximately zero" is ***not a method step***. Method steps begin with verbs like "receiving," "transmitting," or "adjusting" (see claim 15). No such language exists in the apparatus claims of the '117 patent.

Second, under Federal Circuit precedent, the phrase "a dark level bias configured to adjust the combined signal…" is not a mixed method-apparatus claim. An apparatus claim is not indefinite for using functional language. *MasterMine Software, Inc. v. Microsoft Corp.*, 874 F.3d 1307, 1313-16 (Fed. Cir. 2017). "[T]he *Nautilus* standard of 'reasonable certainty' does not exclude claim language that identifies a product by what it does." *BASF Corp. v. Johnson Matthey Inc.*, 875 F.3d 1360, 1366 (Fed. Cir. 2017). "If an apparatus claim 'is clearly limited to a[n apparatus] possessing the recited structure and capable of performing the recited functions,' then the claim is not invalid as indefinite." *UltimatePointer, LLC v. Nintendo Co., Ltd.*, 816 F.3d 816, 826 (Fed. Cir. 2016) (citation omitted).

Courts have explained the distinction between permissible functional language describing capabilities and impermissible method language in an apparatus claim as follows:

> A simple analogy would be ***a claim which physically describes a pair of scissors designed to cut paper, then states, "upon opening and closing the sharp edges of the scissors on a piece of paper, the paper is cut."*** The language describes the ***capability of the scissors***; it is function language. Infringement occurs upon the manufacturing and sale of scissors that are capable of cutting paper. ***The IPXL rule***

> ***would apply only if the patent claimed the physical description of the scissors, then stated within the same claim: "and the method of using said scissors to cut a piece of paper."***

Yodlee, Inc. v. Cashedge, Inc., No. C05-01550, 2006 WL 3456610, at *5 (N.D. Cal. Nov. 29, 2006).

The claim language "a dark level bias *configured to* adjust the combined signal…" in claim 1 is describing the capabilities of the claimed apparatus. Courts have repeatedly and consistently held that "configured to" in an apparatus claim denotes the capabilities of the apparatus thereby rendering the apparatus claim definite and ***not*** a mixed method-apparatus claim.

> ***Courts consistently find that claims containing both a physical description of an apparatus and a description of the apparatus' function, e.g.,*** 'communicates,' 'populates,' '***configured to***,' 'and upon activation' ***were not impermissible apparatus-method claims***. Instead, ***these 'claims simply use active language to describe the capability of the apparatuses***; they do not claim the activity itself .'

Vistan Corp. v. Fadei USA, Inc., No. C 10-4862, 2012 WL 1496099, at *8 (N.D. Cal. Apr. 27, 2012) (citing *Ricoh Co. v. Katun Corp.*, 486 F. Supp. 2d 395, 402 (D.Del. 2007). This district has similarly recognized that "configured to" in claim language denotes the capability of the claimed apparatus and is not a mixed method-apparatus claim. *Kara Tech. Inc. v. Stamps.com Inc.*, No. CV 05-1890, 2008 WL 8089236, at *20 (C.D. Cal. Apr. 3, 2008) ("claims containing both a physical description of an apparatus and a description of the apparatus' function, e.g.,… 'configured to'…were not impermissible apparatus-method claims" and these claims "describe the capability of the apparatuses…").

The *Collaboration Properties, Inc. v. Tandberg ASA*, No. C05-10940, 2006 WL 1752140 (N.D. Cal. June 23, 2006) case is instructive. In *Collaboration Properties*, the claim limitation at issue was "the system is *configured to* reproduce images…" in a claim directed to a teleconferencing system. *Id*. at *6. The defendant Tandberg argued that "the phrase beginning with 'configured to' injects

method steps into the purported system claim" and thus the claims were invalid as being a mixed method-apparatus claim. *Id*. at *6-7. The court held the claims valid and not indefinite as "the claims require capability, but not actual use." *Id*. at *7. The court rejected Tandberg's argument that "configured to" injects method steps into an apparatus claim as meritless providing the following explanation.

> ***Tandberg's reading of IPXL Holdings*** and Lyell is ***so sweeping that it would render invalid nearly all of the claims at issue in all of the cases cited in this opinion***, including the claims in IPXL Holdings itself which were not found to be indefinite. ***The court seriously questions whether any competent attorney could reasonably believe that Tandberg's legal position is correct***.

Id. (emphasis added).

VIZIO is similarly arguing that "dark level bias *configured to* adjust the combined signal" is a method step in an apparatus claim. This is the exact same argument that the court rejected in *Collaboration Properties*. *Id*. at *6-7. ***VIZIO's same argument has been consistently rejected by courts*** throughout the country. *VR Optics, LLC v. Peloton Interactive, Inc.*, 345 F. Supp. 3d 394, 401 (S.D.N.Y. 2018) (holding that an apparatus claim stating "logic *configured to* control the display" is definite and not a mixed method-apparatus claim as it "merely describes how the claimed apparatus itself is capable of functioning"); *Maz Encryption Tech., LLC v. Lenovo (US) Inc.*, No. 13-303, 2015 WL 4035049, at *9-10 (D.Del. June 30, 2015) (holding that an apparatus claim stating a computer "*configured to*…receive…" is definite and not a mixed method-apparatus claim); *L.C. Eldridge Sales Co., Ltd. v. Azen Mfg. Pte., Ltd.*, No. 6:11cv599, 2013 WL 2285749, at *3 (E.D. Tex. May 23, 2013) (holding that an apparatus claim stating an air pressurization system is *"configured to* inject pressurized air into the housing" is definite and not a mixed method-apparatus claim); *WAGO Verwaltungsgesellschaft mbH v. Rockwell Automation*, No. 1:11-CV-00756, 2012 WL 775683, at *7 (N.D. Ohio Mar. 7, 2012) (holding that claims were definite and not mixed method-apparatus claims stating "Patent's use of '*configuring* the device' reflects functional

language describing hardware characteristics of the device, not a method of using the device").

Accordingly, the Court should reject VIZIO's arguments and hold that the "dark level bias" terms are definite.

Third, "[a] description of the circuit's operation may provide sufficiently definite structure." *Power Integrations, Inc. v. Fairchild Semiconductor Int'l., Inc.*, 711 F.3d 1348, 1364 (Fed. Cir. 2013). The limitation at issue was "a soft start circuit that provides a signal instructing said drive circuit to discontinue said drive signal when said magnitude of said oscillation signal is greater than a magnitude of said frequency variation signal." The Federal Circuit found that the word "circuit" combined with a functional description of the circuit was "sufficient structure" for the limitation to be definite and not means-plus-function clause. *Id*.

The claims of the '117 patent provide a similarly detailed description of the operation of the "brightness control circuit" and are thus definite. For example, claim 1 describes the operation of the circuit in sufficient detail for one of ordinary skill in the art to know whether there is infringement.

> 1. A brightness control circuit with selective ambient light correction comprising:
>
> a first input configured to receive a user signal indicative of a user selectable brightness setting;
>
> a light sensor configured to sense ambient light and to output a sensing signal indicative of the ambient light level;
>
> a multiplier configured to selectively generate a combined signal based on both the user signal and the sensing signal; and
>
> a dark level bias configured to adjust the combined signal to generate a brightness control signal that is used to control a brightness level of a visible display such that the brightness control signal is maintained above a predetermined level when the ambient light level decreases to approximately zero.

Ex. A, claim 1. This detailed description of the operation of the circuit is sufficient structure to render the claims definite. *Power Integrations*, 711 F.3d at 1364.

Fourth, VIZIO's argument that replacing "value" or "signal" for "dark level bias" would render the "a dark level bias configured to adjust the combined signal to generate a brightness control signal" limitation "entirely functional" is meritless. In addition to being a description of the operation of the circuit, a "dark level bias" signal is a physical structure in the circuit. The Federal Circuit has repeatedly rejected the argument that signals are not "physical" structures. *Arrythmia Res. Tech., Inc. v. Corazonix Corp.*, 958 F.2d 1053, 1059 (Fed. Cir. 1992) ("The view that "there is nothing necessarily physical about 'signals' " is incorrect."); *In re Taner*, 681 F.2d 787, 790 (C.C.P.A. 1982) (stating that in the Court's precedent, "signals were viewed as physical"). Therefore, the "dark level bias" signal is itself sufficiently definite structure.

Fifth, the case law that VIZIO relies on is inapposite on the facts. In *IPXL*, the Federal Circuit held that an apparatus claim containing the limitation "*the user uses the input means* to either change the predicted transaction information or accept the displayed transaction type and transaction parameters," which required a human to participate in an apparatus claim, was indefinite. *IPXL Holdings, LLC v. Amazon.com, Inc.*, 430 F.3d 1377, 1384 (Fed. Cir. 2005). The Federal Circuit reasoned that it was invalid because it was "unclear whether infringement ... occurs when one creates a[n infringing] system, or whether infringement occurs when the user actually uses [the system in an infringing manner]." *Id*.

Contrary to *IPXL*, none of the claims of the '117 patent require a human to perform any steps. In fact, as explained above with respect to Figures 4, 8, and 9, the "dark level bias" is a signal generated within the claimed circuit, which uses the value to adjust the combined signal. Furthermore, unlike in *IPXL*, one of ordinary skill in the art would know that there was infringement of claim 1 of the '117 patent when one makes, sells or imports a "brightness control circuit" containing a "dark level bias" signal.

VIZIO's reliance on *Rembrandt* and *Bushnell* is inapplicable to the facts

here. In *Rembrandt*, the claim was to a data transmitting device that contained a standalone clause stating, "transmitting the trellis encoded frames." *Rembrandt Data Techs., LP v. AOL, LLC*, 641 F.3d 1331, 1339 (Fed. Cir. 2011). The Federal Circuit held the claim to be indefinite because "transmitting the trellis encoded frames" was a method step in an apparatus claim. Similarly, relying on *Rembrandt*, the district court in *Bushnell*, in an unpublished opinion, found the limitation "wherein the system further comprises *maintaining* a list of bit strings or character sets" indefinite. *Bushnell Hawthorne, LLC v. Cisco Sys., Inc.*, No. 1:18-cv-760, 2019 WL 2745735, at *6 (E.D. Va. July 1, 2019). *Bushnell*, which VIZIO relies on, is under appeal at the Federal Circuit.

The claims here bear no resemblance to those in *Rembrandt* or *Bushnell*. "A dark level bias configured to adjust" is not a clear method step like "transmitting" or "maintaining" because it described a characteristic or capability of the brightness control circuit and a method of using the claimed brightness control circuit. Furthermore, unlike the claims at issue in *Rembrandt* and *Bushnell*, the apparatus claims of the '117 patent only state how the apparatus is "configured to" perform thus stating capabilities of the apparatus and are thus not mixed method-apparatus claims. *Collaboration Properties*, 2006 WL 1752140, at *6-7.

VIZIO's reliance on *Power Integrations*, an unpublished district court case, is similarly misplaced. *Power Integrations, Inc. v. ON Semiconductor Corp.*, No. 16-cv-06371, 2018 WL 5603631 (N.D. Cal. Oct. 26, 2018). The claim at issue with the indefinite limitation in italics is shown below:

> 1. A regulator circuit comprising:
>
> …a switch comprising a first terminal, a second terminal and a control terminal, said switch coupling said first and second terminals when a control signal is received at said control terminal
>
> *…said control signal <u>being provided</u> when no feedback signal is provided at said feedback input and said duty cycle signal is in said high state*

Id. at *15. The limitation at issue required the "control signal" to be provided to the claimed circuit from *outside* the circuit upon certain conditions being met. The court held that this limitation was a method of using the apparatus and was thus indefinite. *Id*. at *17-18.

In the claims of the '117 patent, the "dark level bias" is provided from within the "brightness control circuit" ***not*** outside of the claimed circuit as in *Power Integrations*. Ex. A, Figs. 4, 8, 9, col. 7:17-35, 10:10-12, 11:10-15. As Figures 4, 8, and 9 and their associated equation show, the "dark level bias" is a generated by, and a structural characteristic of, the claimed "brightness control circuit." *Id*. Moreover, the apparatus claims of the '117 patent are different than the claim at issue in *Power Integrations* because they state how the apparatus is "configured to" perform *(i.e*., the capabilities of the apparatus) and are thus not mixed method-apparatus claims. *Collaboration Properties*, 2006 WL 1752140, at *6-7.

Furthermore, this *Power Integrations* is an unpublished district court case that, on its face, appears to be contrary to the Federal Circuit precedent. *See HTC Corp. v. IPCom GmbH & Co., KG*, 667 F.3d 1270, 1277 (Fed. Cir. 2012) (holding disputed limitations definite because they "merely establish those functions as the underlying network environment in which the [claimed] mobile station operates."). As in *HTC*, the limitation at issue in *Power Integrations* appears to state the environment in which the claimed regulator circuit would operate.

5. VIZIO's Second Alternative Argument About Conflicting Dependent Claims Is Meritless and Legally Erroneous

VIZIO admits that, in the dependent claims, "dark level bias" clearly means a signal or the value of that signal. ECF 105 at 18. Therefore, per Polaris' construction, "dark level bias" is perfectly consistent across all claims and there is no conflict. VIZIO attempts to create a conflict where there is none by arguing that, if "dark level bias" is some unidentified "component," then that "component" cannot be added or multiplied as required by dependent claims 2, 4, and 5. This is simply not true. VIZIO admits in its argument that, in the dependent claims, "dark level

bias" means a signal or the value of that signal. ECF 105 at 18. As explained above, the "dark level bias" in claim 1 is a signal whose value is used to adjust the combined signal, which is consistent with the dependent claims as even VIZIO admits. There is no conflict between claim 1 and its dependent claims 2, 4, and 5.

The cases that VIZIO cites are inapposite on the facts. The *Loyalty* case involved a strangely drafted claim where the phrase "at least one of one or one or more of [the] computer" was repeated three times within a single claim resulting in inconsistencies with that claim and a dependent claim that similarly stated "different ones of the one or more computers." *Loyalty Conversion Sys. Corp. v. Am. Airlines, Inc.*, No. 2:13-cv-655, 2014 WL 4352489, at *4-5 (E.D. Tex. Sept. 2, 2014). The claims of the '117 patent do not contain such repetitive language or inconsistencies.

VIZIO also cites *MONKEYmedia* in which claims added during reexamination were "nonsensical" and "incoherent." *MONKEYmedia, Inc. v. Apple, Inc.*, No. A-10-CA-319-SS, 2015 WL 4758489, at *11-13 (W.D. Tex. Aug. 11, 2015). That is not the case here. Rather, the claims and specification of the '117 patent are perfectly consistent that the "dark level bias" is a signal whose value is used to adjust the combined signal.

VIZIO incorrectly argues that claims 2, 4, and 5 disclose method steps. Dependent claims 2, 4, and 5 define the claimed brightness control circuit apparatus by stating its capabilities and are thus not indefinite. *MasterMine*, 874 F.3d at 1313-16 (holding that functional language describing capabilities of an apparatus do not render an apparatus claim indefinite). Polaris addresses VIZIO's other arguments above as they are identical for the independent claims.

D. "Approximately Zero" Is Not Indefinite

Claim Term	Polaris' Construction	VIZIO's Construction
"the brightness control signal is maintained above a predetermined level when the ambient light level decreases to approximately zero"	Plain and ordinary meaning	Indefinite

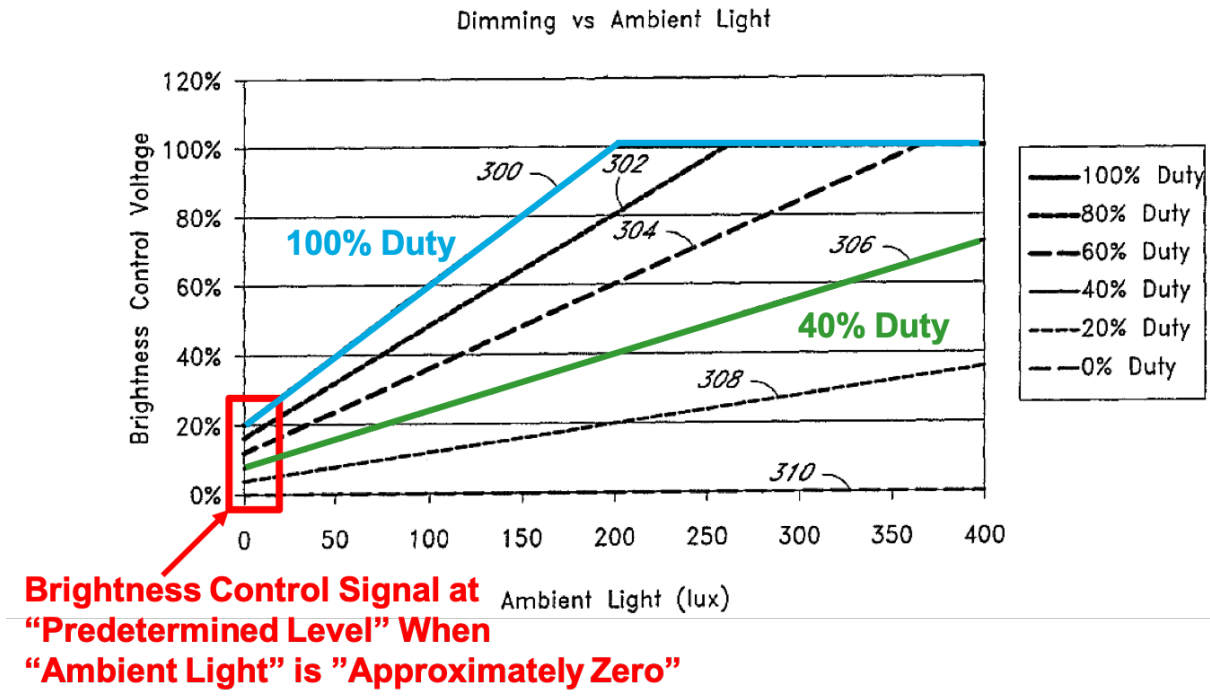
The term "approximately zero" is not indefinite under the law. VIZIO argues that "approximately zero" renders all claims of the '117 patent indefinite because one would not know what "approximately zero" means or how to measure it. VIZIO's argument is meritless in the context of the '117 patent. ***First***, regarding how to measure ambient light, both the claims and the specification are clear that a light sensor is used to measure ambient light. *See e.g.,* Ex A, Figs. 1-2, 5-6, 8-9, col. 1:60-2:16, 2:31-43, 3:3-20, 4:48-55, 5:5-7, 5:15-22, 6:22-25, 7:3-35, 8:10-9:6, 9:38-46, 10:10-19, 10:33-36, 10:44-51, 11:3-15, claim 1.

Second, "a patentee need not define his invention with mathematical precision in order to comply with the definiteness requirement." *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370 (Fed. Cir. 2014). The term "approximately zero" accounts for any measurement or rounding errors present in ambient light sensors. *Duraflame, Inc. v. Hearthmark, LLC*, No. CV 12-01205 RS, 2013 WL 594241, at *7-8 (N.D. Cal. Feb. 14, 2013) (construing similar term "about" to include amounts "within measurement errors and rounding approximations"). One of ordinary skill in the art would understand that, as a practical matter, an ambient light sensor will have some threshold at which it will report zero ambient light even though there may still be photons in the environment. Balakrishnan Decl., ¶ 30. One of ordinary skill in the art would understand the language "approximately zero" to address this issue to account for the practical limitation in the sensitivity of light sensors in measuring ambient light in the environment. *Id*.

Third, courts have consistently found similar claim terms to be definite and valid. *Glaukos Corp. v. Ivantis, Inc.*, No. SACV 18-620 (Selna, J.) (C.D. Cal. Aug. 16, 2019), ECF No. 237 at 17-19 (holding "about" not indefinite in "about 2 mm" or "about 6 mm"); *Parker Compound Bows, Inc. v. Hunter's Mfg. Co., Inc.*, No. 5:14-cv-00004 2016 WL 617464, at *22-24 (W.D. Va. Feb. 12, 2016) (holding that "approximately 13 inches" is not indefinite); *Max Blu Tech., LLC v. Cinedigm Corp.*, No. 2:15-cv-1369-JRG, 2016 WL 3688801, at *30 (E.D. Tex. July 12, 2016)

(holding that "less than approximately 700 nanometers" is not indefinite); *Whirlpool Corp. v. Ozcan*, No. 2:15-cv-2103-JRG, 2016 WL 7474517, at *3 (E.D. Tex. Dec. 29, 2016) (holding that "about 2 cm" is not indefinite); *Transcend Medical, Inc. v. Glaukos Corp.*, No. 13-830, 2015 WL 5546988, at *8 (D.Del. Sept. 18, 2015) (holding that "less than about 1 mm" is not indefinite). VIZIO's position is contrary to the law, and the logical conclusion of its argument would mean that all patent claims in all issued patents that contain the term "approximately" would be invalid.

Fourth, as explained in Polaris' opening claim construction brief, one of ordinary skill in the art would clearly understand the scope of the claims and whether there is infringement because the claims simply require that, as the ambient light approaches and reaches zero, the system maintains the brightness control signal above a predetermined level. Balakrishnan Decl., ¶ 31. This is clearly shown in Figure 3.



Ex. A, Fig. 3 (annotated).

As the ambient light measured along the x-axis approaches zero (*i.e.*, "approximately zero"), the '117 patent explains, and Figure 3 shows, that the brightness control signals is maintained above a "predetermined level." Ex. A, col.

5:52-6:21, Fig. 3. The "predetermined level" of the brightness control signal (measured along the y-axis) when the ambient light is approximately zero can vary depending on the brightness setting selected by the user (*e.g.*, the duty). For example, when the user selects a brightness setting that corresponds to the 100% duty (blue line), the "predetermined level" in Figure 3 is 20% of the maximum brightness control signal voltage when the ambient light level is "approximately zero." Similarly, when the user selects a brightness setting that corresponds to the 40% duty (green line), the "predetermined level" is about 8% of the maximum brightness control signal voltage when the ambient light level is "approximately zero."

Importantly, one of ordinary skill in the art could easily determine whether a system is configured to maintain the brightness control signal above a predetermined level (rather than going to zero) when the ambient light decreases to approximately zero without needing a specific lux measurement because maintaining a predetermined level when the ambient light decreases to zero will be a property programmed into the infringing system. Balakrishnan Decl., ¶ 34. In other words, as the ambient light decreases to approximately zero, either the system is programmed to maintain the brightness control signal above a predetermined level or it is not, which does not depend on a particular ambient lux value. *Id*.

Sixth, all of the case law relied on by VIZIO is inapplicable as it relates to very different terms (*e.g.*, "minimal redundancy," "substantially equal," and "elongated"). As cited above, courts have repeatedly held that similar terms containing "approximately" or "about" are not indefinite.

III. CONCLUSION

For the aforementioned reasons, the Court should adopt Polaris' constructions.

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FEINBERG DAY KRAMER ALBERTI LIM TONKOVICH & BELLOLI LLP

By: /s/ *Robert F. Kramer*
Robert F. Kramer

Attorneys for Plaintiff
Polaris PowerLED Technologies, LLC